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AUTHOR Hansen, Jacqueline; Stansfield, Charles
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ABSTRACT

Research has shown student field-independent cognitive style (FI), as opposed to field-dependent cognitive style (FD), to be correlated moderately with success on selected second language tasks. A trait-treatment interaction approach was utilized in this study to examine the role of FD/I among 236 college students enrolled in six sections of an introductory Spanish course. The purpose of the investigation was to determine the significance of student style, teacher style, and student-teacher stylistic match or mismatch upon second language achievement. Field dependence was assessed with the Group Embedded Figures Test and subjects were then classified as FD or FI with a median-split technique. Factorial analyses revealed a significant main effect for student style in performance on measures of Spanish linguistic, communicative, and integrative competence. In each instance the FI group of students exhibited a superior performance. There was no main effect for teacher style nor were there any significant interaction effects. It was concluded that the learner factor (FD/I cognitive style) was of more importance in achievement than the situational factor (teacher style). It is suggested that further naturalistic, ethnographic research be undertaken to examine student-teacher styles as process variables in the second language classroom to complement outcome-oriented studies such as this one. (Author)

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FOREIGN LANGUAGE ACHIEVEMENT IN RELATION TO STUDENT-TEACHER COGNITIVE STYLES: A PRELIMINARY STUDY

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By

Jacqueline Hansen
Boulder Valley Public Schools

and

Charles Stansfield
University of Colorado

FL 012 438

Abstract

Initial research has shown student field-independent cognitive style (FI), as opposed to a field-dependent style (FD), to be correlated moderately with success on selected second language tasks. A trait-treatment interaction approach was utilized in this study to examine the role of FD/I among 236 college students enrolled in six sections of an introductory Spanish course. The purpose of the investigation was to determine the significance of student style, teacher style, and student-teacher stylistic match or mismatch upon L2 achievement. FD/I was assessed with the Group Embedded Figures Test and subjects were then classified as FD or FI with a median-split technique. Factorial analyses revealed a significant main effect for student style in performance on measures of Spanish linguistic ($p<.01$), communicative ($p<.01$), and integrative ($p<.001$) competence. In each instance the FI group of students exhibited a superior performance. There was no main effect for teacher style nor were there any significant interaction effects. It was concluded that the learner factor, FD/I cognitive style, was of more importance in achievement than the situational factor of teacher style. However, it is suggested that further naturalistic, ethnographic research be undertaken to examine student-teacher styles as process variables in the second language classroom to complement outcome-oriented studies such as this one.

Introduction

In recent years second language researchers have attempted to isolate particular learner characteristics and cognitive strategies which enhance or hinder progress in learning another language. Such research has been conducted in hopes of refining a model of second language education that would promote more successful learning among a greater number of students.

One of the learner factors that has received scholarly attention is the cognitive style construct known as field dependence-independence (FD/I). Field independence, as opposed to field dependence, has been shown to play a helpful though minor role in the development of second language proficiency in a formal environment.[1]

While the results of these exploratory investigations suggest that greater field independence is associated in a modest fashion with better second language achievement, it is important to consider several questions when evaluating the role of FD/I in second language learning. First, what is the significance, educational as well as statistical, of

the performance difference between field-dependent and field-independent students? Secondly, does the learner's cognitive style interact with other factors in the learning situation, such as the teacher's cognitive style, to affect achievement differentially? The purpose of this paper is to explore these issues in relation to some pertinent data. Initially, however, it is necessary to review background information on the FD/I construct, its relationship to education in general and to second language learning in particular.

Background

The psychological term "cognitive style" refers to variations among individuals in preferred ways of perceiving, organizing, analyzing, or recalling information and experience. These stylistic preferences in manner of thinking are believed to influence human functioning pervasively in a number of areas, from the cognitive and affective to the termperamental and interpersonal.[2] At present field dependence (FD) and field independence (FI) are interpreted respectively as contrasting tendencies to rely primarily on either external or internal frames of reference in processing information. Theoretically, field dependence fosters greater skill in interpersonal relations, while field independence nurtures greater cognitive restructuring ability on various perceptual and intellectual tasks.[3]

It is believed that FD persons develop a greater degree of connection between the self and external stimuli than do FI individuals. This leads to an interpersonal orientation among FD's which allows them to focus on other people for information and, in turn, to develop competence in understanding or dealing with others. Such traits as warm and outgoing, emotionally open, sensitive to social cues, strongly interested in or attentive to others, and a preference for being with people have been associated with FD persons in the research literature.[4] Interestingly, similar traits have been linked to successful second language learners.[5]

In contrast FI people are considered to have developed a more definite boundary between the inner self and the outer world, leading to a greater degree of autonomy when interacting with others or executing certain cognitive tasks. Witkin and Goodenough in the research cited previously explain that FI individuals are liable to be interested in the abstract and theoretical, to need psychological distance from others, and to be less sensitive than FD persons to either their own social impact or the social undercurrents of a given situation. Descriptors such as cold, aloof, individualistic, and task-oriented have been applied to FI people. This more impersonal orientation may result in reduced social skills among relatively FI persons.

The FI proclivity to be more autonomous of the external "field" is nevertheless thought to foster the development of cognitive restructuring abilities useful for certain perceptual and intellectual tasks. Such mental restructuring may entail altering the "field" of available information rather than using or adhering to it "as given." This cognitive analysis can occur in various ways, such as segmenting on organized field so its parts are seen as distinct from the background, imposing structure on a disorganized field, imposing structure on a disorganized field, or providing a new structure which is different from the one suggested by the inherent or external organization of the field. For example, there is some evidence in the verbal realm that FI is related to greater effectiveness among monolinguals in performing such verbal processing or restructuring tasks as sentence disambiguation and deeper-level grammatical transformations.[6] Similar linguistic restructuring seems involved in learning to manipulate a new language appropriately in various contexts.

Since FD/I is believed to affect patterns of thinking, personality, and social interaction in a consistent manner, it has been discussed as an educational factor which influences classroom behavior and subsequent achievement. In these discussions FD/I is seen as a process variable linked to how students learn, how teachers teach or prefer to teach, and the way in which students and teachers interact.[7]

In a learning situation, for instance, FI's are likely to employ an hypothesis-testing approach to problem-solving. This is a strategy currently thought to operate in second language acquisition processes.[8] Conversely, FD's tend to display more passive, spectator-like strategies to acquire information. When organizing material FD's are apt to rely on the given, external structure of the material to provide organization and insights whereas FI's may use internalized rules garnered from experience to analyze or restructure the material being learned. Thus, students are thought to exhibit different approaches to learning based upon their FD/I proclivity. These differences in learning strategies are reflected in the distinction suggested by Hatch who categorizes L2 learners as either "data-gatherers" or "rule-formers."[9]

In addition to influencing learning strategies, FD/I also has been related to differences in educational-vocational interests among college students.[10] FI persons, more likely interested in the theoretical and abstract, tend to select pursuits which require cognitive restructuring skills but which don't particularly incorporate social content or an interpersonal orientation (i.e., natural sciences, mathematics, or engineering). Contrastingly, FD persons favor vocations with a more overt interpersonal emphasis, areas where regular contacts with other people would prevail over analytical restructuring activities (i.e., teaching,

nursing, counseling, social work).

Beyond affecting students' learning styles and vocational interests, cognitive style is believed to provide a basis for instructional preferences among teachers. While research on actual classroom situations is limited, the teaching strategies that FD and FI instructors claim to prefer seem to differ.[11] First, teachers vary in their extent of expressed interest in interacting with students. FD teachers favor student participation in setting goals and directing learning, open classroom discussions, and the establishment of a warm or personal learning environment. FI instructors, on the other hand, prefer teacher-directed learning, structured class activities, and teaching situations which are less personal and involve less student-teacher interaction. Despite these preferential differences, little evidence exists that either style in and of itself produces better all-around teaching or learning.[12]

As well as looking at student style or teacher style as a potent educational variable, the interactive effects of student-teacher stylistic match or mismatch have also been examined to some extent. This research has generally dealt with the effect of teacher-student styles on classroom social interaction more than with their effect on learning.[13] The results indicate that when students and teachers are matched

for degree of FD/I they like each other better and feel a greater interpersonal attraction than when they are mismatched in this regard. This greater attraction is presumed to be conducive to better social interaction. Inferences extrapolated to academic achievement expectations should be approached with caution, since little evidence has been gathered to indicate whether or not students learn more or less from instructors who display a cognitive style similar to their own.

These tentative insights into the educational implications of FD/I have been gained by psychologists over the last twenty years. More recently second language researchers have also shown interest in cognitive style as a trait that may affect second language learning. Since the mid-1970's several studies have addressed the role of FD/I in learning another language. Basically, these efforts have attempted to assess the degree of association between student cognitive style and performance on a variety of second language tasks.

One group of investigations examined FD/I as a cognitive disembedding ability which might affect the second language performance of secondary students studying French-as-a-Second-Language in Canada. In two related experiments Bialystok and Frohlich concluded that FD/I was a weak predicator of informal and formal receptive and productive competence.[14]

Another study by Tucker and others found FI to be a significant predictor of success on a general achievement test, though it was not so associated with performance on tests of reading comprehension, listening comprehension, or oral production.[15] FI also appeared as a significant learner factor in the research of Naiman and his colleagues, but here it was related to greater success on imitation and listening comprehension tasks.[16] Additionally, this latter research project concluded that FD and FI students seemed to process and produce linguistic structures in distinct ways.

In a previous article the present authors examined the correlational relationship between FD/I and the foreign language achievement of college students in an introductory-level Spanish class. While the correlations in that study were modest, ranging from .20 to .43 ($p < .001$), they did suggest that the FD/I variable played a minor role in second language learning. Field independence was found to be associated with better linguistic competence and overall achievement. It was also linked, though not as strongly, to the attainment of communicative competence in the second language.[17]

The Problem

Although these studies on student FD/I and

second language performance reported rather mixed findings, it appears that the restructuring skills associated with the FI cognitive style are useful in acquiring second language proficiency in the classroom setting. However, it is important to ascertain the significance of achievement differences between FI and FD students before training the latter to utilize FI strategies or before altering teaching methods to address both types of learners more distinctly. That is, is the difference in achievement great enough to warrant instructional adaptations?

Secondly, beyond student style, the interaction effects on achievement of student-teacher cognitive style match or mismatch should be examined as a possible source of varying success. Such an interactional perspective is helpful when attempting to perceive the complex relationship between learner characteristics and contextual constraints that may affect performance, such as teacher style.[18] For instance, do student-teacher cognitive styles interact to influence learning differentially?

In an effort to explore these concerns, we performed further analyses on the data used in the correlational study mentioned above. The results of those additional analyses are the main focus of this article and will be discussed below.

Methodology

Subjects: Some 236 students enrolled in an introductory Spanish course at the University of Colorado and their six recitation-section instructors formed the sample group for this study.

The one semester course was designed to promote both linguistic and communicative competence in Spanish, providing emphasis on these two areas through lectures, language laboratory practice, small recitation classes, and textbook-workbook drills. The course met fifty minutes daily, five days per week for sixteen weeks. Twice each week the course coordinator lectured the entire group on grammar. The remaining three meetings were recitation sessions, of about twenty students each, conducted by graduate teaching assistants. Attendance at the latter sessions was required. Primary emphasis in the small classes was given to the development of communicative competence. As a result Spanish was used extensively and each week coordinated communication practice was a focus of the lesson plans.

The students were assumed to constitute a representative sample of undergraduate students in introductory Spanish courses at similar universities. They were classified appropriately as beginning learners of Spanish since University regulations prohibit enrollment in a first semester course if the language was studied elsewhere. It was accepted that random assignment to recitation sections had occurred through

ordinary registration procedures (instructors were unknown upon registration). The group of students was about evenly divided between males and females.

The six recitation-section instructors were all master's degree candidates in the Department of Spanish and Portuguese. Two were male and four were female. Their responsibilities included providing pattern drill on grammar points and facilitating continual practice in oral communication among students. All six possessed a high degree of Spanish language proficiency and each was teaching the course for the first time. The teaching assistants varied, however, in the emphasis of their graduate studies. Three were majoring in Spanish language and linguistics, two emphasized Spanish literature, and one had chosen Spanish teaching methodology as the major field of study. The tenured professor who coordinated the course and presented the lectures was treated as a constant in this study.

Research Design and Procedures: This research study was conceived to explore further the relationship between cognitive style and second language learning after an initial correlational analysis revealed a significant and positive correlation between field independence and foreign language achievement.

The main conern here was to ascertain how significant the differences were between FD and FI

students, and between students with FD versus FI teachers. A factorial, ex post facto research design was selected to examine these differences and to allow examination of any interaction effects as well. This approach reflects the trait-treatment interaction perspective elucidated by Cronbach and Snow[19] and advocated recently by McLaughlin for second language research.[20] In this instance student cognitive style was the learner trait of central interest while teacher cognitive style was the situational or treatment variable. A nested, two-way, fixed-effects ANOVA was employed in the data analysis.

The FD/I proclivity of the students and teachers was assessed by means of the Group Embedded Figures Test (GEFT).[21] This instrument requires the subject to perceive and outline a simple geometric shape obscurely embedded within a larger, more complex drawing. The GEFT score indicates one's ability to locate relevant information within, or separate it from, the overall organizational context or "field." In theory, the restructuring skills elicited by this visual task are also utilized when performing similar cognitive operations in the verbal or symbolic realm. A median-split technique classified both students and teachers as FD or FI according to obtained GEFT score. This procedure was used instead of an extreme-groups division in order to include a larger number of students and all six recitation instructors.

The dependent variable in this design was degree of foreign language proficiency achieved during the one semester course. General proficiency was separated into three aspects of language ability: 1) linguistic competence, or the ability to manipulate basic structural units of Spanish, measured by scores on a comprehensive, discrete-point achievement test (Final Exam), 2) communicative competence, or the ability to give and receive oral messages in Spanish, assessed by teacher ratings of oral proficiency derived from student performance on weekly classroom oral communication tasks (Oral Evaluation), and 3) integrative competence, or the combined linguistic and contextual proficiency of the student, observed by scores on a multiple-choice Cloze Test.[22]

Results

The findings of the analysis of variance procedures will be discussed in relation to the questions posed at the outset. The nested, two-way ANOVA produced rather complex tables. Those tables are not included here since they involve other factors not discussed in this paper. They are available upon request from the authors. Tables 1-3 illustrate the differences in group means highlighted by the factorial analyses.

Insert Tables 1-3 about here.

First, there was a significant main effect among the students sampled for the student cognitive style factor on each criterion of Spanish skill: Final Exam ($p<.01$), Oral Evaluation ($p<.01$), and Cloze Test ($p<.001$). That is, there was a significant difference in performance between the FD and FI student groups. In each instance the FI student group displayed a statistically significant higher level of achievement.

Secondly, there was no main effect in any of the analysis for the instructor cognitive style factor. In other words, there were no important differences in student achievement on any of the Spanish measures for students with FD versus FI instructors.

Thirdly, no significant interactions were found between student-teacher cognitive style and subsequent performance on any of the language proficiency instruments. Ostensibly student-teacher FD/I match or mismatch did not produce a notably distinct effect on student achievement.

Discussion

Given these statistical results it seems that, in answer to the first question posed here, student cognitive style does make a significant difference in foreign language achievement among the group of students examined

in this study. It is perhaps even more noteworthy to point out that the FI student group scored more than 1/3 of a standard deviation (s.d.) above the FD group on each measure (see Table 4). This magnitude of difference is considered by evaluation methodologists to indicate an educationally, as opposed to statistically, significant difference in degree of learning.[23] Thus, FI restructuring abilities apparently do contribute to more successful linguistic, communicative, and integrative performance in a formal Spanish course at the university level.

Yet the findings should be approached with some caution. Since instructor was treated as a fixed, rather than a random factor, the results can only be discussed in terms of the people who participated in this study. Such an analysis is necessarily the initial and most modest approach to assessing factor significance. However, it makes it difficult to generalize these findings broadly. Another shortcoming in interpretation results from the lack of comprehensive statistical control for the subjects' verbal, quantitative, and spatial intelligence. This makes analysis of the relationship between FD/I and achievement less precise than if such intellectual aptitude information were available.

Although student cognitive style did influence degree of learning in this analysis, teacher cognitive style did not do so in any significant fashion. Neither were there any interaction effects between teacher style

and student style that affected performance significantly. Since particular teacher style as well as conditions of matching/mismatching students and teachers for style produced no notable differences in achievement, the results imply that the learner factor was of far greater import in this investigation than the teacher, or situational, factor. This may have resulted from the fact that the teaching and testing requirements were quite structured, precise, and uniform across all classes, bringing forth instructional behaviors which did not reflect a teacher's more habitual or natural style. Or, perhaps the instructors indeed taught differently, but to no consequence in producing varied student performance. In as much as observations of actual classroom teaching style were not part of this investigation, no comment can be made about what teachers actually did in their recitation sections. Ethnographic and interactional analyses of classroom processes might shed more light on the role of teacher style. Teacher FD/I cannot be assumed to have no bearing on student outcome or achievement as a contextual variable until the context can be described more thoroughly.

Even though no statistically significant interactions occurred between student-teacher cognitive styles, it is interesting to look at the mean performance of four subgroups of students (FD females, FI females, FD males, and FI males) with FD or FI instructors. In Figures 1-3

Insert Figures 1-3 about here

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it can be seen that the FI female group consistently attained the highest achievement, with FD or FI instructors (though they regularly did better with FI instructors). On the Final Exam and Oral Evaluation the FD female group had the next highest performance record, followed by FI males, and both groups did slightly better with FD instructors. Performance contrasts on the Cloze Test were somewhat different. In this case group mean scores didn't vary as much by type of instructor; and the FI student groups, both male and female, performed better than the FD groups. The FD male group repeatedly performed at the lowest level on all three indicants of Spanish skill. Moreover, they performed less satisfactorily with FI than with FD instructors. The contrast in performance between FI females and FD males with FI instructors was continually the most marked relationship noted. For example, on the Final Exam and Oral Evaluation, FI females achieved a group mean which was more than one s.d. higher than the mean of the FD male group with FI instructors. This is a very noticeable difference indeed.

Several speculative comments come to mind about these subgroup differences. First, the course demanded a rigorous pace from the students, combining as it did the traditional expectations of grammar learning with oral communication requirements. This meant that more material was actually included in the curriculum. As a result, a great deal of responsibility was placed on the students to study independently and to synthesize material continually. Apparently the FI female group was able to do this most effectively.

This may have resulted from a fortuitous combination of cognitive restructuring ability, intelligence, and good study habits. Interpersonal factors may also have come into play.

On the other hand, the FD male group seemed to have real difficulty meeting the course expectations, especially with FI instructors. Further research might help explain if this was related to interpersonal relations in the classroom environment. For instance, the FD male group did perform slightly better with FD instructors (as did the FI female group with FI instructors). Thus, matching for cognitive style may have promoted better interpersonal communication which in turn may have led to higher motivation or more "tutoring" activities between students and teachers. Once again, an ethnographic or interactional research study might clarify this issue.

It is of interest that the three instructors categorized as FD included the two Spanish literature majors and the one who had chosen Spanish teaching methodology as a field of study. The FI instructors all were majoring in Spanish language and linguistics. These differences in academic specialization, which may be related to FD/I proclivity, perhaps affected the class environment and emphasis of the recitation sections. The FD instructors may have created a warmer, more hospitable setting, and may not have stressed grammatical analysis to the same degree as FI teachers.

Lastly, student cognitive style appeared to influence

performance more overtly on the Cloze Test than on the other measures. Here the FI students did better regardless of teacher style or student sex. It seems likely that the Cloze Test involves cognitive restructuring abilities much more directly than the other two instruments, the Final Exam and Oral Evaluation.

Conclusions

The research discussed here examined the role of FD/I cognitive style in foreign language achievement. In brief, the results showed a significant difference between FD and FI college students on three types of Spanish proficiency: linguistic, communicative, and integrative. The FI group displayed a notably higher level of achievement in each instance. There were no significant interactions between student-teacher cognitive style and Spanish achievement. However, a secondary examination of the data revealed that the group of FI female students consistently scored at the highest level with either FD or FI instructors while the FD male group repeatedly evidenced the lowest level of attainment. Therefore, in this study it can be concluded that the learner's FD/I cognitive style was of the teacher's cognitive style. As noted previously, though, instructor style may not have been operating to a great degree in these classes. Further, the admitedly complex process of second language learning necessitates examining more variables than were incorporated in this project.

It should also be noted that student cognitive

style was found to be an educationally significant factor in second language achievement. The performance of FI versus FD students differed noticeably (by 1/3 of a s.d.) and their relative positions were similar on all three tests of Spanish proficiency. The FI group repeatedly performed above the total group mean whereas the FD group regularly scored below that point. Yet the amount that each group deviated from the total mean was not extreme. In terms of a normal distribution, each group varied less than one s.d. from the total mean on the criterion measures. Both cognitive style groups performed toward different ends of the middle range ($\pm$ 1 s.d.). For example, in terms of letter-grade equivalents on the Final Exam, the overall class average was C while the FI and FD group means were C+ and C- respectively. The conclusion of the investigators is that FD/I styles do affect foreign language achievement in the formal setting in modest but educationally significant fashion. An extreme-groups research design might lend further support for this conclusion.

Moreover, the disquieting pattern of markedly lower achievement for the FD male students with FI instructors, though not analyzed statistically, suggests that cognitive style may influence performance in a more subtle way than can be discerned from this outcome-oriented study. The FD males appear to be having scholastic difficulty in a college foreign language course, and this warrants further investigation into how they learn and how they are taught. Such process research is needed prior to

or in conjunction with examining what educational techniques might improve their performance.

Future research, then, should address FD/I as a process variable affecting both student and teacher educational and social patterns in the classroom. Data should be gathered about the actual learning and teaching strategies used by FD versus FI persons, as well as about their linguistic, communicative and social interactions.[24] For instance, do FI students study independently to greater benefit than FD students? Do FD students more easily rely on FD teachers for role-models or for extra help? Do FD and FI teachers treat the same material in a different manner? Naturalistic research into the processes of learning and teaching might ultimately provide answers to these questions.

A second issue raised by these findings is whether or not college curricula really stress and evaluate both linguistic and communicative skills to the equal degree implied in contemporary literature. The restructuring skills associated with FI appear to be useful in all areas of L2 competence among the students examined here. Since the social and interpersonal communicative abilities linked to FD do not seem as clearly helpful, perhaps the latter are not being called forth in any important way in the classroom. That is, linguistic acuity and manipulative skill may still be given more significance in texts, class activities, and assessments than social and interpersonal communicative competence. Then, too, FD and FI teachers may place a different emphasis on linguistic versus

communicative competence within a general curriculum. The educational process type of research recommended above may assist in clarifying these points as well.

The research reported here suggest, in conclusion, that student and teacher differences in field-dependent-independent cognitive styles deserve further study as a factor which may affect both the second language learning process and the achievement outcome.

TABLE 1

FINAL EXAM* GROUP MEAN SCORES

Group	$\bar{X}$	Letter-grade	n
FI Students	80.8**	C+	122
FD Students	74.8	C-	112
Students with FD Instructors	78.4	C	115
Students with FI Instructors	77.2	C	119
FI Students with FI Instructors	81.1	C+	60
FI Students with FD Instructors	80.4	C	62
FD Students with FD Instructors	76.3	C	53
FD Students with FI Instructors	73.4	D+	59

FD = field dependent
FI = field independent
n = number of cases

*Total Group Mean = 77.8 (C); s.d. = 14.44.

**$p < .01$

TABLE 2

ORAL EVALUATION* GROUP MEAN SCORES

Group	$\bar{X}$	n
FI Students	54.1**	123
FD Students	49.8	112
Students with FD Instructors	51.9	116
Students with FI Instructors	51.9	119
FI Students with FI Instructors	55.0	60
FI Students with FD Instructors	53.1	63
FD Students with FD Instructors	50.8	53
FD Students with FI Instructors	48.9	59

FD = field dependent
FI = field independent
n = number of cases

*This was calculated as a T-score for each student: standardized mean = 50; s.d. = 10.

**$p < .01$

TABLE 3

CLOZE TEST* GROUP MEAN SCORES

Group	$\bar{X}$	n
FI Students	30.40**	107
FD Students	28.00	114
Students with FD Instructors	29.13	114
Students with FI Instructors	29.22	107
FI Students with FI Instructors	30.8	55
FI Students with FD Instructors	30.0	61
FD Students with FD Instructors	28.3	53
FD Students with FI Instructors	27.7	52

FD = field dependent
FI = field independent
n = number of cases

*Total Group Mean = 29.20; s.d. = 5.05

**$p < .001$

TABLE 4

Group Differences in Relation to

Standard Deviation(s.d.)

Measure	1/3 s.d.	Difference between FD and FI groups
Final Exam	4.76	6.0
Oral Evaluation	3.33	4.3
Cloze Test	1.67	2.4

FD = field dependent
FI = field independent

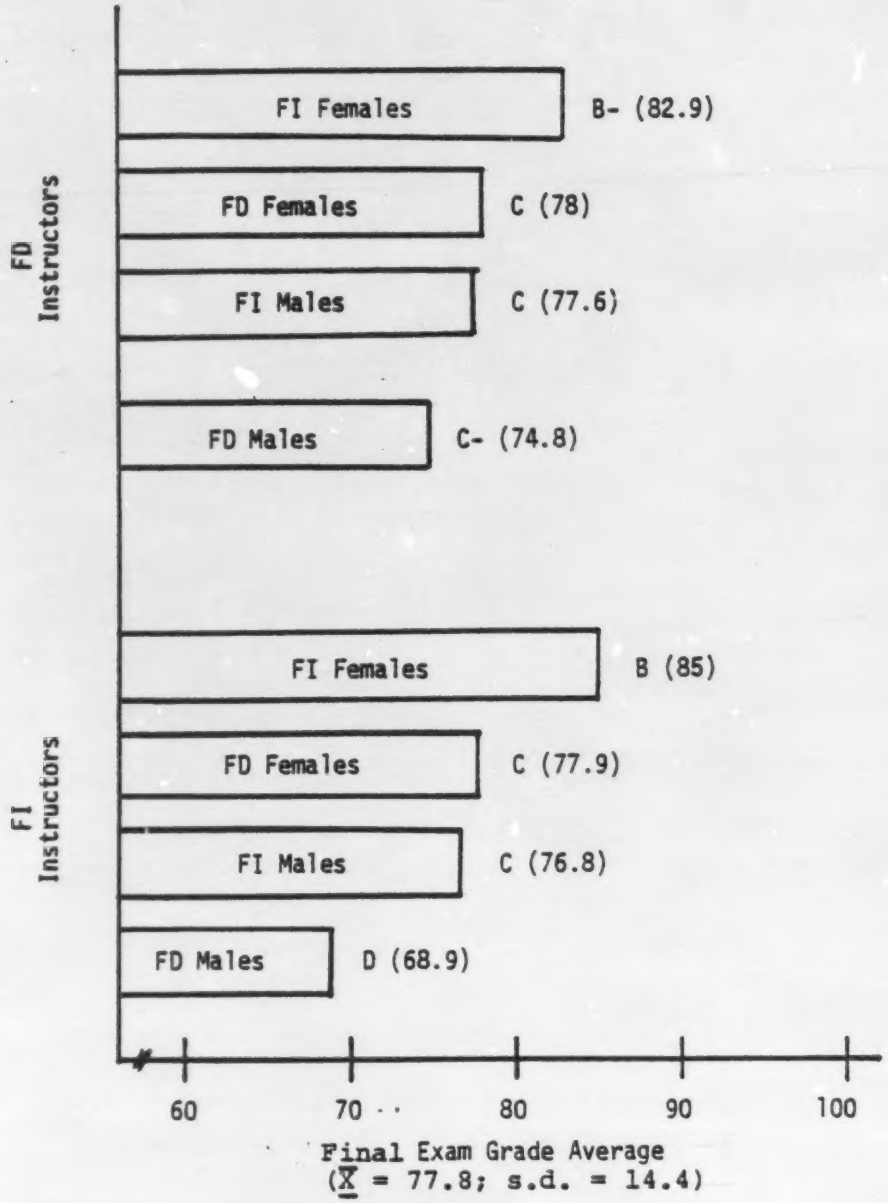

Figure 1

Graph of Final Exam Group Mean Scores of FI/FD Males and Females by Type of Instructor (FD or FI)

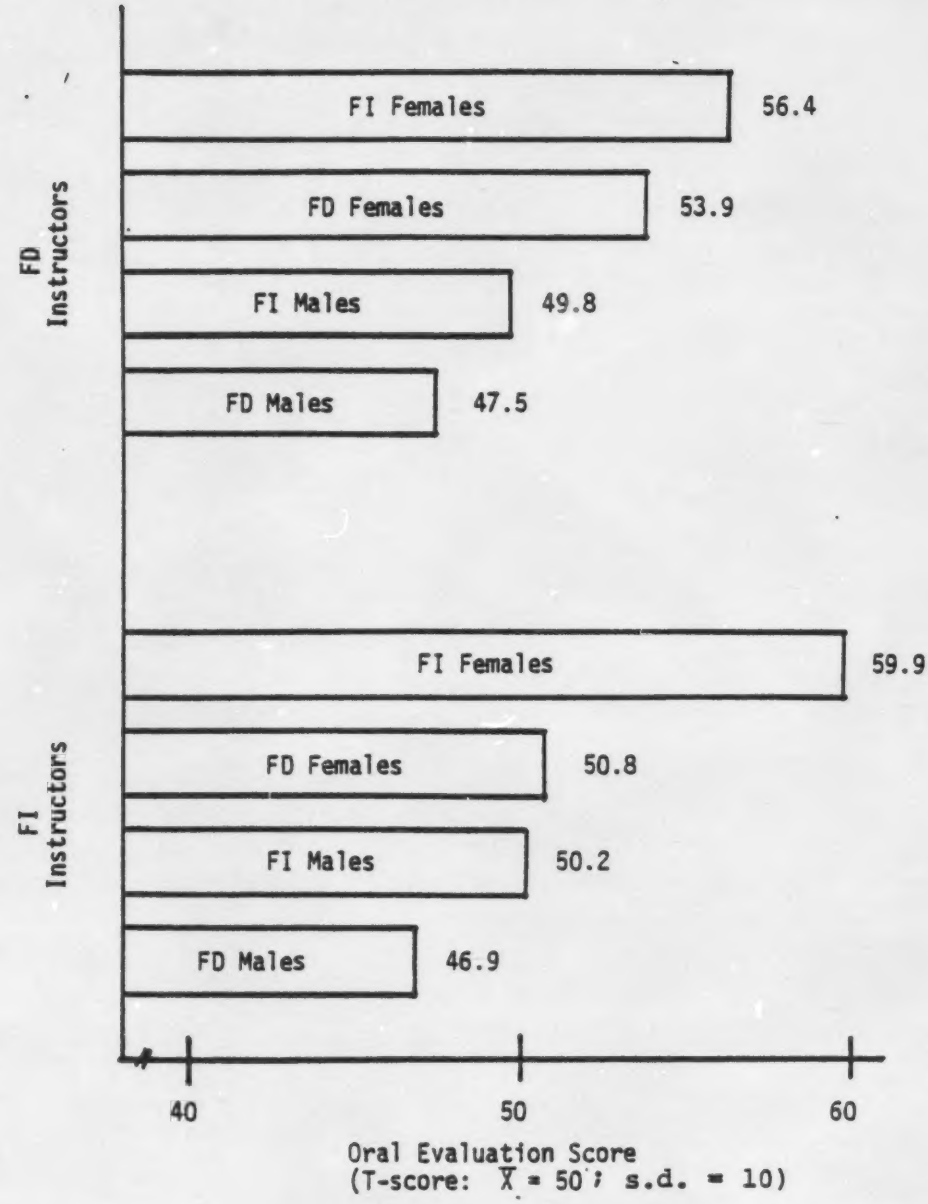

Figure 2

Graph of Oral Evaluation Group Mean Scores of FI/FD Males and Females by Type of Instructor (FD or FI)

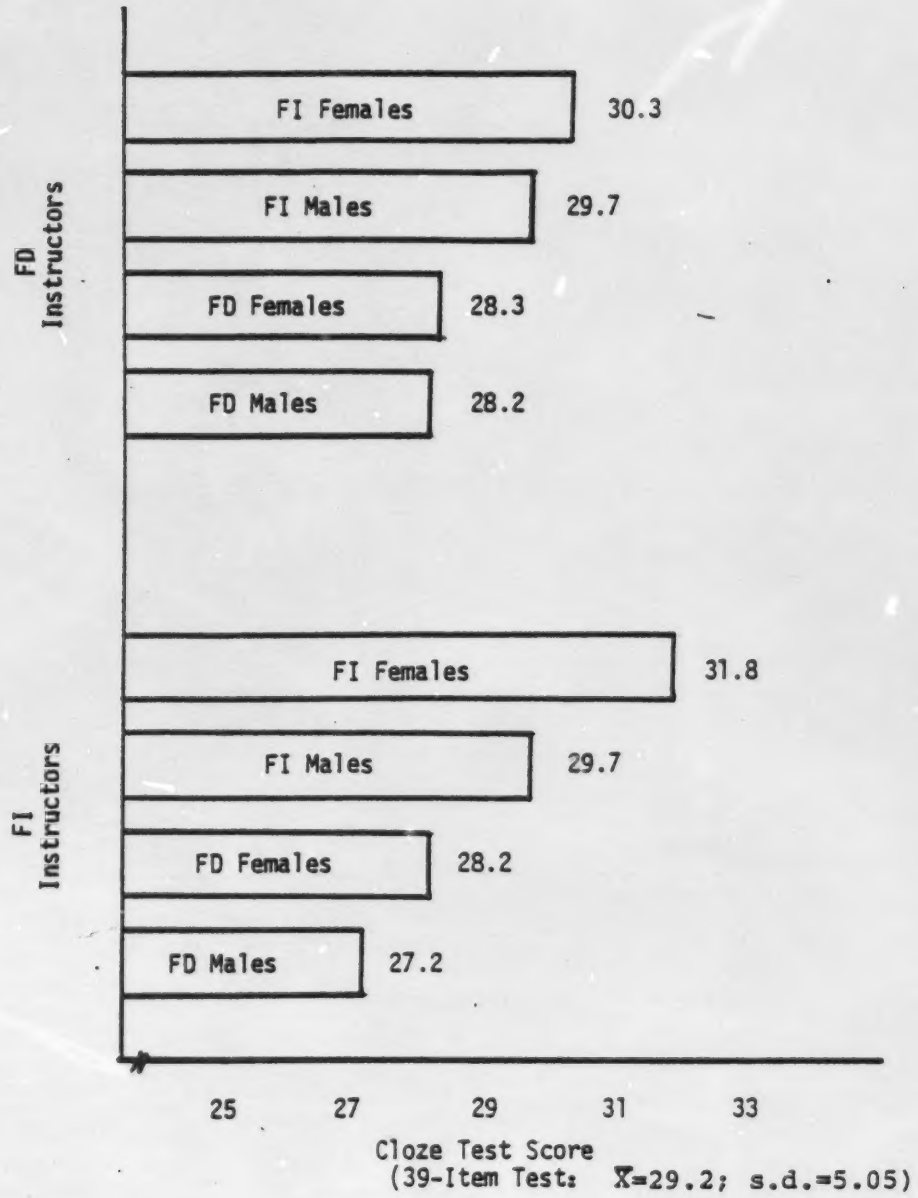

Figure 3

Graph of Cloze Test Group Mean Scores of FI/FD Males and Females by Type of Instructor (FD or FI)

NOTES

[1]See G. Tucker, E. Hamayan and F. Genesee, "Affective, Cognitive, and Social Factors in Second Language Acquisition," Canadian Modern Language Review, 32 (1976), pp. 214-226; E. Bialystok and M. Frohlich, "Aspects of Second Language Learning in Classroom Settings," Working Papers on Bilingualism, (1977), pp. 1-26; E. Bialystok and M. Frohlich, "Variables of Classroom Achievement in Second Language Learning," Modern Language Journal, 62 (1978), pp. 327-335; N. Naiman, M. Frohlich, H. Stern and A. Todesco, The Good Language Learner (Toronto: Ontario Institute for Studies in Education, 1978); J. Hansen, "Field-Dependent-Independent Cognitive Style and Foreign Language Proficiency Among College Students in an Introductory Spanish Course" (Unpublished Doctoral Dissertation, University of Colorado, 1980); and J. Hansen and C. Stansfield, "Field Dependent - Independent Cognitive Styles and Foreign Language Proficiency Among College Students," Language Learning, in press.

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